



Ekso Bionics Monthly Newsletter: Implementation Science

The addition of rehab technology tools to a rehabilitation center may bring improvements in patient outcomes, engage staff and patients, and illustrate a center's commitment to providing state-of-the-art care. To make this addition successful though, it is important that a well-developed plan be in place. Too often, technology is brought into a center and then under-utilized. This month, we direct our attention to implementation science and highlight how to grow successful programs with new technologies through planning, training, and investing in a commitment to succeed.



Clinical Team Jumps Onboard

Marianjoy Rehabilitation Hospital (now part of Northwestern Medicine), has applied a rigorous implementation process in adapting Ekso GT™ to their practice. A project was launched with its physical therapists to look at how they adapt to new technology, identifying the best protocols and clinical pathways to optimize clinical outcomes.

[Watch the video.](#)

Best Practices: Start with Implementation Planning

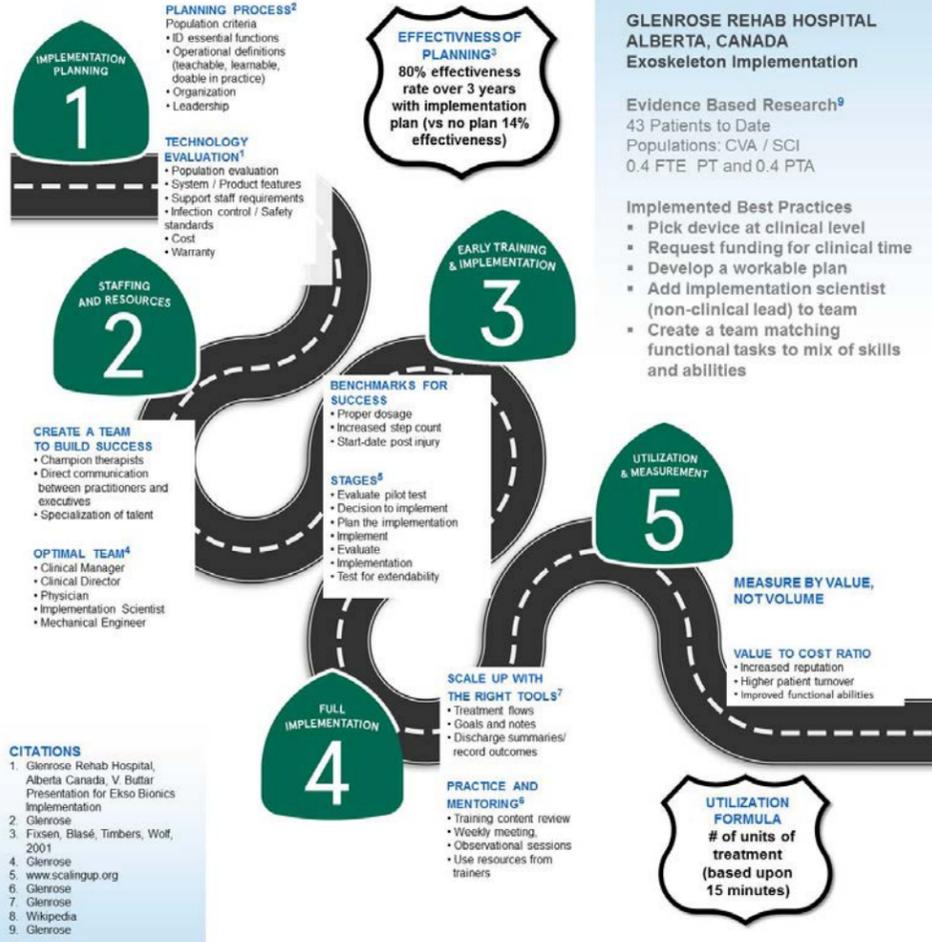
Ekso Bionics clinical team (in collaboration with our rehabilitation facility customers) has developed processes for effectively implementing exoskeleton technology. This visual demonstrates best practices including implementation planning, optimal team selection, training, practice and measurement. Glenrose Rehabilitation Hospital in Alberta Canada engaged their physical therapists in implementing the program with strong evidence-based results.

Vickie Buttar, a Physical Therapist at Glenrose Rehabilitation Hospital describes how Ekso GT was successfully introduced into their clinical practice, using a structured implementation process:

A framework (which incorporates the principles of evaluation and re-evaluation) helped our team to implement a new technology. It also allowed us to be reflective and focused in our implementation planning. As an outcome, we had the optimal infrastructure: training, staffing, targeted patient population, dose, length of appointment, referral process and documentation, priority criteria, and forms in place prior to seeing our first patients. As a

THE ROAD TO IMPLEMENTATION

Integrating Exoskeleton Technology



result, we found our early implementation to be much more organized and focused.

Implemented evidence-based best practices

- Pick device at the clinical level
- Request funding (for clinical time)
- Develop a workable Implementation Plan
- Add Implementation Scientist (non-clinical lead) to project manage
- Create team based on (functional) tasks needed, right mix of skills / abilities

CASE STUDY

Good Shepherd Rehab Network



Enhancing Patient Neuroplasticity and Financial Profitability with the Ekso Robotic Exoskeleton

Organization Description

Good Shepherd Rehabilitation Network (Allentown, PA) is a nationally recognized neuro-rehabilitation leader, offering a continuum of care for people with injuries, complex medical needs and physical and/or cognitive disabilities. Patients come to Good Shepherd each year for specialized programs in stroke, orthopedics and sports injuries, brain injury, spinal cord injury, amputation and more. Good Shepherd provides services under Medicare, Medicaid, private pay, and commercial insurers.

Program Overview

Good Shepherd's clinical philosophy centers around returning patients to their maximal functional recovery. Good Shepherd embraces the principles of neuroplasticity in their rehabilitation program. Neuroplasticity is the capacity for continuous alteration of the neural pathways and synapses of the Central Nervous System in response to injury or repetitive experience. Good Shepherd's rehabilitation programs are based on motor learning techniques and approaches that induce neural plasticity. They provide training to patients that is: task specific, meaningful and challenging, repetitive and intensive, provided in an enriched environment with movements performed in a relatively normal biomechanical position and manner.

Challenge

Good Shepherd's clinicians are looking for ways to enhance motor control and functional recovery for their patients. They believed that rehabilitation robotics could be a viable solution for a broad patient population. They wanted to augment their locomotor training program with a robotic exoskeleton that would enhance neuroplasticity and maximize functional recovery. As with any facility, they must make investments that they feel will deliver the desired clinical outcomes and support the organization's mission in a manner that is financially viable.

Solution

Good Shepherd utilized the Ekso robotic exoskeleton designed for use by individuals with weakness or paralysis of the lower limbs, due to spinal cord injury (SCI) and stroke, in rehabilitation institutions,* as part of their customized rehabilitation care continuum.

Implementation Approach

Good Shepherd integrated their first Ekso device in their out-

"the Ekso System represents a compelling marriage of repeated positive clinical outcomes and very positive financial margins for our program."

Frank Hyland, PT, MS VR,
Rehabilitation Services and Hospital Administrator
Good Shepherd Rehabilitation Hospital

patient rehabilitation clinic. They hosted a series of interviews to determine which team of four physical therapists would obtain Ekso Certification to help build the clinical program.

Good Shepherd then fortified their clinical program with marketing efforts to raise visibility of their new acquisition and drive demand in the local and regional markets. They issued a press release and were featured on one of the affiliate stations; put an advertising "wrapper" promoting the Ekso wearable robot on one of their transportation vans, and added banners on the facility campus. After achieving repeated positive patient experiences and outcomes, they developed videos for use in social media and focused on optimizing their organic search results online. Within three months, the Ekso System was in usage 35-40 hours a week.

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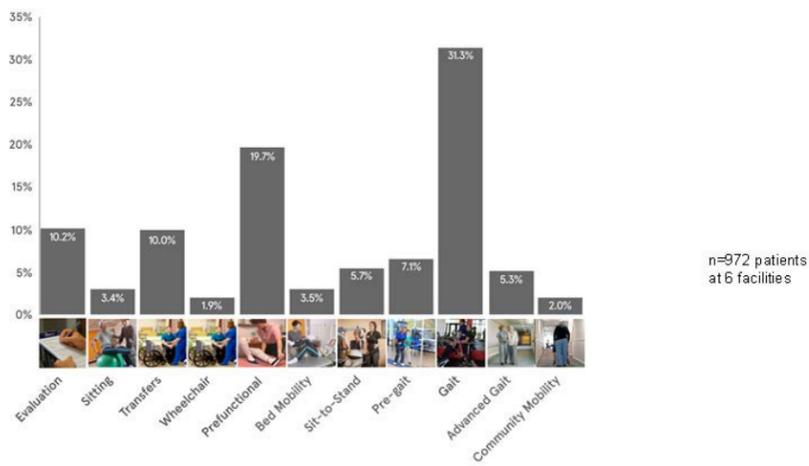
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Good Shepherd enhances Patient Neuroplasticity and Financial Profitability with the Ekso Robotic Exoskeleton

Good Shepherd Rehabilitation Hospital in Allentown, PA integrated Ekso into their catastrophic care practice for patients with stroke and SCI. Developing a model of care based on neuroplasticity evidence-based principles and functional recovery, Good Shepherd worked with over 100 inpatients and 200 outpatients in just one year. The practice achieved a 27% growth in neurorehabilitation service lines and clinical outcomes - consistently exceeding national benchmarks.

[Learn about Good Shepherd implementation approach.](#)

Physical Therapy Interventions for Patients With Stroke in Inpatient Rehabilitation Facilities



Source: Jette DU et al. Phys Ther. 2005;85:238-248.

Choose Technology Wisely; Then Adapt to your Program

Successful rehabilitation technology implementation requires that your organization select and apply the best combination of technologies to meet the broad needs of patient interventions. For stroke patients, gait training (including pre and post) and pre-functional interventions are the most frequently cited in inpatient facilities. Often, the initial hurdle for PTs in a rehabilitation setting is embracing a new technology. To that end, proper buy-in, early and ongoing training, and an internal “mobilizer” to champion the process will ease the transition through a fully implementable program.

Ekso Bionics. - 1414 Harbour Way South Suite 1201, Richmond, CA 94804
Contact Us

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